

12-02-05



**PATENT**

Attorney Docket No. A-72343  
Dorsey File No. 470425-00018

ZJM

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

*In re application of:*

HENSON et al.

Serial No.: 10/602,543

Filing Date: June 23, 2003

For: *Use of Endophytic Fungi to Treat Plants*

Examiner: Not Yet Assigned

Art Unit: 1616

U.S. Express Mail, Receipt No. EV 792964585 US :

Dated: November 30, 2005

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicants wish to draw the attention of the U.S. Patent and Trademark Office to the references cited on the accompanying form PTO/SB/08A-B. In accordance with 1287 Off. Gaz. Pat. Office 163, 10/19/2004, no copies of U.S. patents and U.S. published applications are enclosed. Copies of all other references are enclosed.

Further, the undersigned certifies that references listed on the enclosed Form PTO/SB/8A-B, Substitute for Form PTO-1449, marked with an asterisk (\*), were first cited in a communication relating to the results of the international search of PCT/US03/19983 dated

Serial No.: 10/602,546  
Filing Date: June 23, 2003

September 17, 2004, for the counterpart PCT application. A copy of the international search result for the counterpart PCT application is enclosed herewith.

Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application. Submission of the present document shall not be construed as an admission that a search has been made or that better art does not exist.

As far as is known to the undersigned, this Information Disclosure Statement is being filed within three months of the filing date of a national application, within three months of the date of entry of the national state in an international application, or before the mailing date of a first Office Action on the merits as set forth in 37 C.F.R. § 1.97(b), and therefore no fee is required.

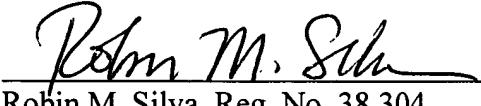
While no further fee is believed to be due, if this belief is in error, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-2319 (File No. 470425-00018 ; Docket No. A-72343/RMS/THR).

Serial No.: 10/602,546  
Filing Date: June 23, 2003

Please direct any calls in connection with this application to the undersigned at  
(415) 781-1989.

Respectfully submitted,  
DORSEY & WHITNEY LLP

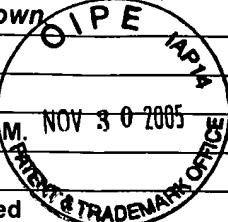
Dated: 11/30/05  
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Attachments:

Copy of International Search Report from PCT/US03/19983 dated September 17, 2004  
Form PTO/SB/08A-B, Substitute for form PTO 1449  
38 references

Substitute for form 1449A/PTO (Modified)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>  Application Number      10/602,543 Filing Date      June 23, 2003 First Named Inventor      HENSON, Joan M. Art Unit      1616 Examiner Name      Not Yet Assigned	
Sheet	1	of	3	Attorney Docket Number      A-72343 (470425-18)	

#### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
isr	A1 *	5,880,343	03-09-1999	Hiruma et al.	

#### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document Country Code <sup>4</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	B1					

#### NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				T <sup>6</sup>
isr	C1 *	AZEVEDO et al., "Endophytic, microorganisms: a review on insect control and recent advances of tropical plants", EJB Electronic J. of Biotechnology, April 2000, 3(1):40-65.				
	C2	BACON, C.W., "Abiotic stress tolerances (moisture, nutrients) and photosynthesis in endophyte-infected tall fescue", Agricul. Ecosys. Environ., 1993, 44:123-141.				
Book	C3	BACON, C.W., et al., "Microbial Endophytes", 2000, Marcel Dekker Inc., N.Y.				
	C4	BORDALLO, J.J., et al., "Colonization of plant roots by egg-parasitic and nematode-trapping fungi", New Phytol., 2002, 154:491-499.				
isr	C5 *	CARETTA et al., "Some filamentous fungi on grassland vegetation from Kenya", Mycopathologia, 1999, 145:155-169.				
	C6	CARROLL, G.C., "The biology of endophytism in plants with particular reference to woody perennials", Microbiology of the Phyllosphere (eds. Fokkema, H.J. & Van Den Heuvel, J.) 205-222 (Cambridge University Press, Cambridge, 1986).				
	C7	CLAY, K., et al., "Fungal endophyte symbiosis and plant diversity in successional fields", Science, 1999, 285:1742-1744.				
Book	C8	DE BARY, A., "Die Erscheinung Symbiose", in Vortrag auf der Versammlung der Naturforscher und Arzte zu Cassel, ed. Trübner, K.J., 1-30, Strassburg, 1879.				
	C9	FREEMAN, S., et al., "Genetic conversion of a fungal plant pathogen to a nonpathogenic, endophytic mutualist", Science, 1993, 260:75-78.				
isr	C10 *	GHOSH et al., "Soil fungi from Orissa (India)-I", Mycologia, 1960, 52:915-918.				
	C11	HERTIG, M., et al., "The terms symbiosis, symbiont and symbiote", J. Parasit., 1937, 23:326-329.				
isr	C12 *	HODGES et al., "Growth of Agrostis palustris in response to adventitious root infection by Curvularia lunata", J. Phytopathol., 1995, 143:639-642.				
isr	C13 *	JAIN, B.L., "Two new species of Curvularia", Trans. Br. Mycol. Soc., 1962, 45:539-544.				

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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<p style="text-align: center;"><b>Substitute for form 1449A/PTO (Modified)</b></p> <p style="text-align: center;"><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p style="text-align: center;">(use as many sheets as necessary)</p>				<p style="text-align: center;"><b>Complete if Known</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td style="width: 50%;">10/602,543</td> </tr> <tr> <td>Filing Date</td> <td>June 23, 2003</td> </tr> <tr> <td>First Named Inventor</td> <td>HENSON, Joan M.</td> </tr> <tr> <td>Art Unit</td> <td>1616</td> </tr> <tr> <td>Examiner Name</td> <td>Not Yet Assigned</td> </tr> </table>		Application Number	10/602,543	Filing Date	June 23, 2003	First Named Inventor	HENSON, Joan M.	Art Unit	1616	Examiner Name	Not Yet Assigned
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Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>6</sup>
	C14	JUMPPONEN, A., et al., "Dark septate endophytes: a review of facultative biotrophic root-colonizing fungi", <i>New Phytol.</i> , 1998, 140:295-310.			
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isr	C16 *	LATCH, G.C.M., Physiological interactions of endophytic fungi and their hosts, Biotic stress tolerance imparted to grasses by endophytes", <i>Agricul. Ecosys. Environ.</i> , 1993, 44:143-156.			
	C17	LEWIS, D.H., "Symbiosis and mutualism: crisp concepts and soggy semantics", <i>The biology of Mutualism</i> (ed. Boucher, D.H.) 29-39, Croom Helm Ltd., London, 1985.			
	C18	MARKS, S., et al., "Effects of CO <sub>2</sub> enrichment, nutrient addition, and fungal endophyte-infection on the growth of two grasses", <i>Oecologia</i> , 1990, 84:207-214.			
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	C20	PETRINI, O., "Taxonomy of endophytic fungi of aerial plant tissues", 1986, <i>Microbiology of Phyllosphere</i> (eds. Fokkema, N.J. & van den Heuvel, J., 175-187, Cambridge University Press, Cambridge.			
	C21	PIROZYNSKI et al., "The origin of land plants: a matter of mycotrophism", <i>Biosystems</i> , 1975, 6:153-164.			
	C22	READ, D.J., "Mycorrhiza-the state of the art", <i>Mycorrhiza</i> (eds. Varma, A. & Hock, B.) 3-34 (Springer-Verlag, Berlin, 1999).			
	C23	REDECKER et al., "Fungi from the Ordovician", <i>Science</i> , 2000, 289:1920-1921.			
isr	C24 *	REDMAN et al., "Biochemical analysis of plant protection afforded by a nonpathogenic endophytic mutant of <i>Colletotrichum magna</i> ", <i>Plant Physiol.</i> , 1999, 119:795-804.			
	C25	REDMAN et al., "Fungal symbiosis: from mutualism to parasitism, who controls the outcome, host or invader?", <i>New Phytol.</i> , 2001, 151:705-716.			
	C26	REDMAN et al., "Thermotolerance Generated by Plant/Fungal Sympiosis", <i>Science</i> , Vol. 298, November 22, 2002, 1581			
	C27	REDMAN, R.S., et al., "Field performance of cucurbit and tomato plants colonized with a nonpathogenic mutant of <i>Colletotrichum magna</i> (teleomorph: <i>Glomerella magna</i> ; Jenkins and Winstead)", 2002, <i>Symbiosis</i> , 32:55-70.			
	C28	SAIKKONEN, K., et al., <i>Annu. Rev. Ecol. Syst.</i> 29, 319-343 (1998).			
book	C29	SCHUTZ, B., "Bioactive Fungal Metabolites-Impact Exploitation", 2001, British Mycological Society, International Symposium Proceedings, University of Wales, April.			
	C30	SIMON et al., "Origin and diversification of endomycorrhizal fungi and coincidence with vascular land plants", <i>Nature</i> , 1993, 363:67-69.			
book	C31	SMALLWOOD, M.F., et al., "Plant Responses to Environmental Stress", 1999, BIOS Scientific Publishers Limited, Oxford.			
	C32	SMITH, A.F., et al., "Structural diversity in (vesicular)-arbuscular mycorrhizal symbioses", <i>New Phytol.</i> , 1997, 137:373-388.			
	C33	SMITH, K.P., et al., "Host variation for interactions with beneficial plant-associated microbes", <i>Annu. Rev. Phytopathol.</i> , 1999, 37:473-492.			

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book	C34	STONE, J.K., et al., in <i>Microbial Endophytes</i> C. W. Bacon, J. F. White Jr., Eds. (Marcel Dekker, Inc., New York, 2000) pp. 3-29.			
isr	C35 *	TAYLOR et al., "Endophytic fungi associated with the temperate palm Trachycarpus fortunei, within and outside its natural geographic range", <i>New Phytologist</i> , May 1999, 142(2):335-346.			
isr	C36 *	VARMA, A., et al., "Pirifmospora indica, a cultivable plant-growth-promoting root endophyte", <i>App. Environ. Microbiol.</i> , 1999, 65:2741-2744.			

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